

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A disk drive comprising:
a head which reads/writes data from/to a disk medium that rotates;
an actuator which includes the head and rotates in a radial direction of the disk medium to move the head to a target point; and
a controller which controls the actuator to position the head in the target point in accordance with ~~serve~~ servo data read from the disk medium by the head,
wherein the disk medium includes a number of data tracks having servo areas and data areas and, when the head records data on the data areas in one of outer and inner radiuses of the disk medium, the servo data whose inclination differs from that of the data is recorded on the servo areas in one of the outer and inner radiuses by a servo head which sets a skew angle different from a skew angle of the head, and the inclination of the servo data becomes smaller than that of the data recorded on the data areas by the head.
2. (Currently Amended) ~~The disk drive according to claim 1, wherein~~ A disk drive comprising:
a head which reads/writes data from/to a disk medium that rotates;
an actuator which includes the head and rotates in a radial direction of the disk medium to move the head to a target point; and
a controller which controls the actuator to position the head in the target point in accordance with servo data read from the disk medium by the head,
wherein the disk medium includes a number of data tracks having servo areas and data areas and, when the head records data on the data areas in one of outer and inner radiuses of the disk medium, the servo data whose inclination differs from that of the data is recorded on the servo areas in one of the outer and inner radiuses and the servo data whose inclination is almost equal to that of the data recorded on the data areas is recorded on the servo areas in the data tracks included in an intermediate radius of the disk medium.
3. (Currently Amended) ~~The disk drive according to claim 1, wherein~~ A disk drive comprising:
a head which reads/writes data from/to a disk medium that rotates;

an actuator which includes the head and rotates in a radial direction of the disk medium to move the head to a target point; and

a controller which controls the actuator to position the head in the target point in accordance with servo data read from the disk medium by the head,

wherein the disk medium includes a number of data tracks having servo areas and data areas and, when the head records data on the data areas in one of outer and inner radiuses of the disk medium, the servo data whose inclination differs from that of the data is recorded on the servo areas in one of the outer and inner radiuses and the servo data whose inclination is 0 degrees and almost equal to that of the data recorded on the data areas is recorded on the servo areas in the data tracks included in an intermediate radius of the disk medium, and the servo data whose inclination is smaller than that of the data recorded on the data areas is recorded on the servo areas in the data tracks included in the outer radius.

4. (Currently Amended) ~~The disk drive according to claim 1, wherein~~ A disk drive comprising:

a head which reads/writes data from/to a disk medium that rotates;

an actuator which includes the head and rotates in a radial direction of the disk medium to move the head to a target point; and

a controller which controls the actuator to position the head in the target point in accordance with servo data read from the disk medium by the head,

wherein the disk medium includes a number of data tracks having servo areas and data areas and, when the head records data on the data areas in one of outer and inner radiuses of the disk medium, the servo data whose inclination differs from that of the data is recorded on the servo areas in one of the outer and inner radiuses and the servo data whose inclination is 0 degrees and almost equal to that of the data recorded on the data areas is recorded on the servo areas in the data tracks included in an intermediate radius of the disk medium, and the servo data whose inclination is smaller than that of the data recorded on the data areas is recorded on the servo areas in the data tracks included in the inner radius.

5. (Canceled).

6. (Original) The disk drive according to claim 1, which is a perpendicular magnetic recording type disk drive having a single pole type head as a write head.

7. (Canceled).

8. (Currently Amended) ~~The method according to claim 7~~ A servo write method that is applied to a disk drive including a head which reads/writes data from/to a disk medium that rotates and an actuator which moves the head to a target point, the method comprising:
using a servo head whose skew angle θ_2 differs from a skew angle θ_1 of the head; and
recording servo data to position the head on servo areas in each of data tracks of the disk medium at an inclination different from that of data recorded on data areas by the head with the skew angle θ_1 ,

wherein the servo data whose inclination is 0 degrees and almost equal to that of the data recorded on the data areas is recorded on the servo areas in an intermediate radius of the disk medium by the servo head, and the servo data whose inclination is smaller than that of the data recorded on the data areas is recorded on the servo areas in an outer radius of the disk medium by the servo head.

9. (Currently Amended) ~~The method according to claim 7~~ A servo write method that is applied to a disk drive including a head which reads/writes data from/to a disk medium that rotates and an actuator which moves the head to a target point, the method comprising:
using a servo head whose skew angle θ_2 differs from a skew angle θ_1 of the head; and
recording servo data to position the head on servo areas in each of data tracks of the disk medium at an inclination different from that of data recorded on data areas by the head with the skew angle θ_1 ,

wherein the servo data whose inclination is 0 degrees and almost equal to that of the data recorded on the data areas is recorded on the servo areas in an intermediate radius of the disk medium by the servo head, and the servo data whose inclination is smaller than that of the data recorded on the data areas is recorded on the servo areas in an inner radius of the disk medium by the servo head.

10. (Canceled).

11. (Currently Amended) ~~The method according to claim 10;~~ A servo write method that is applied to a disk drive including a head which reads/writes data from/to a disk medium that rotates and an actuator which moves the head to a target point, the method comprising:

using a servo head whose skew angle θ_2 differs from a skew angle θ_1 of the head; and
recording servo data to position the head on servo areas in each of data tracks of the
disk medium at an inclination different from that of data recorded on data areas by the head
with the skew angle θ_1

wherein the servo head is provided in a servo track writer that is a device exclusively
to record the servo data on the disk medium, and the servo track writer has a servo head
which sets the skew angle θ_2 different from the skew angle θ_1 of the head, and the servo
track writer uses a servo head having a relatively small skew angle θ_2 which differs from the
skew angle θ_1 of the head of the disk drive, writes servo data while moving the servo head
from an innermost radius to an intermediate radius of the disk medium and then from the
intermediate radius to an outermost radius thereof, and performs a servo write operation such
that an inclination of the servo data corresponding to the skew angle θ_2 of the servo head
becomes smaller than that of user data corresponding to the skew angle θ_1 of the head.

12. (Currently Amended) The method according to claim 7 8, wherein the disk
drive is a perpendicular magnetic recording type disk drive having a single pole type head as
a write head.

13. (New) The disk drive according to claim 2, which is a perpendicular magnetic
recording type disk drive having a single pole type head as a write head.